

## SYSTEM AND METHOD FOR CONVERTING A PLURALITY OF WAVELENGTHS

## 5 ABSTRACT

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the invention, an In one aspect of operable to convert wavelengths of a plurality of optical signals includes a coupler operable to receive a pump signal and a plurality of input signals each input signal comprising at least one wavelength different than the wavelengths of others of the plurality of input optical The apparatus further includes an optical signals. medium operable to receive the pump signal plurality of input signals from the coupler, wherein the pump signal and each of the plurality of input signals are synchronized to overlap at least partially during at least a part of the time spent traversing the optical plurality facilitate generation of a medium converted wavelength signals each comprising a wavelength that is different than the wavelengths of at least some of the plurality of input signals. Various embodiments can result in low cross-talk and/or low polarization sensitivity.

